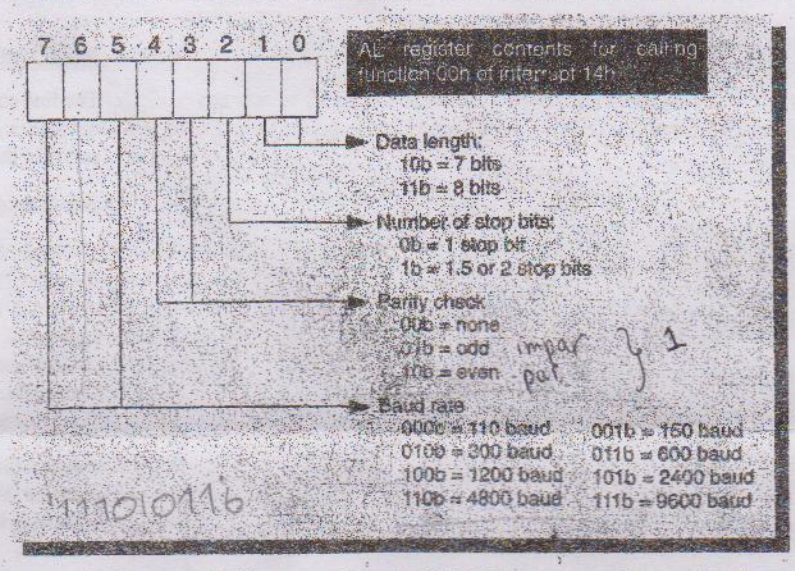
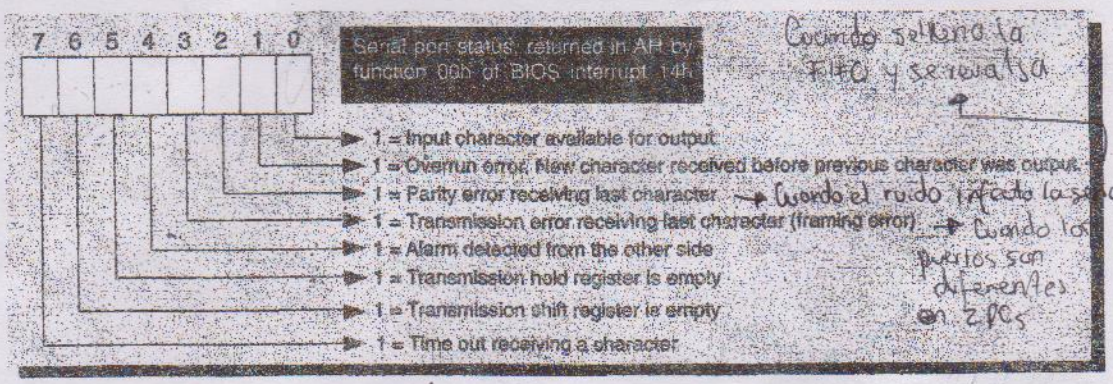
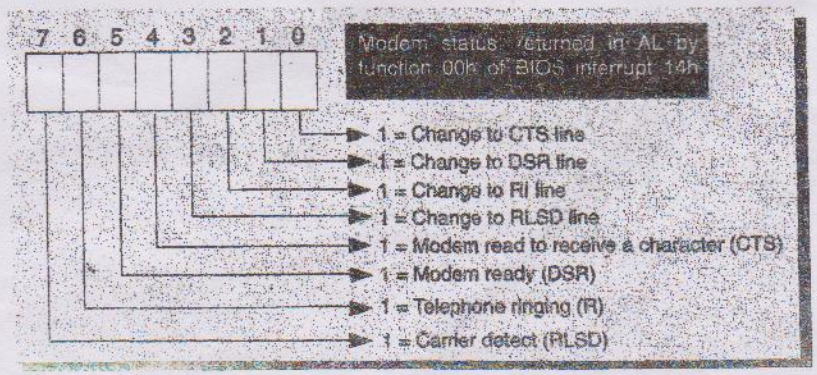
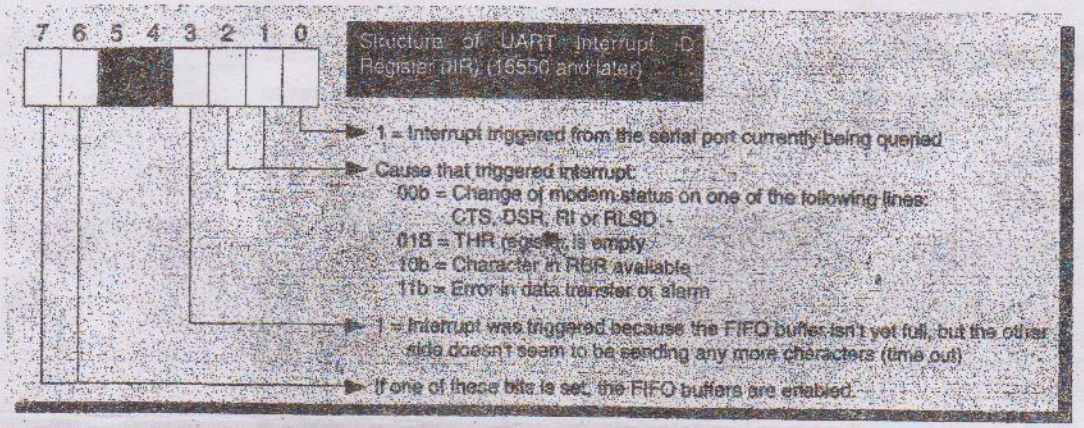



Function 00h returns the line status from the UART line status register as its return value in the AH register. It returns th modem status from the modem status register as its return value in the AL register.






## Accessing The Serial Port From The BIOS

Since the serial port has become an essential component of the PC, the BIOS must deal with it as well. Unfortunately, built-in support for the programmer is weak. A total of four functions are available:

- Setting transmission parameters
- Checking line status
- Sending/receiving characters in polling mode

However, both support for interrupt-driven control of the serial port and functions to access the expanded capabilities of the 16550 and its successors are missing. In practice then, you're forced to program the various serial interface registers directly as we discussed in the previous section. The BIOS functions are included here only for completeness.

All BIOS functions for serial port access are called using interrupt 14h, with the number of the desired function passed in the AH register. In addition the DX register receives the port number, where 0 represents COM1, 1 for COM2, etc.

BIOS Functions For Serial Port Access:

| Number | Task |
|---|---|
| 00h | Set communication parameters |
| 01h | Output characters |
| 02h | Read in characters |
| 03h | Query port status |

### Setting communication parameters and status check

In addition to the arguments in AH and DX, you must pass a value to function 00h in the AL register, whose structure is shown in the following illustration. Notice the BIOS permits only some of the settings directly supported by the UART. Word length for example can only be 7 or 8 bits, and the range of available baud rates lags far behind the capability of the UART.